

Appl. No. : 10/720,834
 Filed : November 24, 2003

AMENDMENTS TO THE CLAIMS

Please replace all prior listings and versions of claims with the following listing of claims.

Claims 1-27 (Cancelled)

28. (Currently Amended) An exercise apparatus comprising:

a support frame and a ring gear supported by said support frame, said ring gear comprising an effective working diameter and being generally fixed relative to said support frame;

a crank supported for rotation about a crank axis relative to said support frame, said crank comprising an effective crank-arm length;

a planetary gear positioned within and engaged with said ring gear, said planetary gear being rotationally connected to said crank about a planetary gear axis and comprising an effective working diameter, said planetary gear axis being generally parallel to and offset from said crank axis; and

a foot-pedal rotationally connected to said planetary gear, whereby said foot-pedal follows a substantially elliptical foot-path as pedal circulates about said planetary gear axis and said crank rotates about said crank axis.

29. (Previously Presented) The exercise apparatus of Claim 28 wherein said effective working diameter of said planetary gear is equal to one-half said effective working diameter of said ring gear.

30. (Previously Presented) The exercise apparatus of Claim 28 wherein said number of teeth formed on said planetary gear is equal to one-half said number of teeth formed on said ring gear.

31. (Previously Presented) The exercise apparatus of Claim 28 wherein said effective working diameter of said planetary gear is equal to about twice said effective crank-arm length of said crank.

32. (Currently Amended) The exercise apparatus of Claim 28 ~~wherein said crank has an effective crank-arm length and~~ wherein a major axis of said elliptical foot-path is greater than twice said effective crank-arm length.

33. (Previously Presented) The exercise apparatus of Claim 32 wherein said major axis of said elliptical foot-path is about quadruple said effective crank-arm length.

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34. CANCELLED

35. CANCELLED

36. (Currently Amended) ~~The exercise apparatus of Claim 35, wherein~~ An elliptical foot-path exercise apparatus comprising:

a support frame;

a crank rotatable relative to said support frame about a crank axis, said crank having an effective crank-arm length;

a foot pedal in mechanical communication with said crank, said foot pedal being sized and arranged relative to said crank so as to follow a substantially elliptical foot-path relative to said support frame and a major axis of said substantially elliptical foot-path being greater than twice said effective crank-arm length; and

said major axis of said substantially elliptical foot-path ~~[[is]]~~ being about quadruple said effective crank-arm length.

37. (Currently Amended) ~~The exercise apparatus of Claim 35 comprising~~ An elliptical foot-path exercise apparatus comprising:

a support frame;

a crank rotatable relative to said support frame about a crank axis, said crank having an effective crank-arm length;

a foot pedal in mechanical communication with said crank, said foot pedal being sized and arranged relative to said crank so as to follow a substantially elliptical foot-path relative to said support frame and a major axis of said substantially elliptical foot-path being greater than twice said effective crank-arm length;

a planetary gear mechanically coupling said crank to said foot pedal, said planetary gear comprising an effective working diameter and being sized and arranged to engage a sun/ring gear so as to form an epicyclic gear train, and said sun/ring gear comprising an effective working diameter.

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38. (Previously Presented) The exercise apparatus of Claim 37 wherein said effective working diameter of said planetary gear is equal to one-half said effective working diameter of said sun/ring gear.

39. CANCELLED

40. (Currently Amended) An exercise apparatus for providing simulated walking or running motion, said apparatus comprising two planetary gears, two sun/ring gears and at least one crank supported and arranged so as to be rotatable about a crank axis, each said planetary gear comprising an effective working diameter and a planetary axis, each said sun/ring gear comprising an effective working diameter, said at least one crank comprising an effective crank-arm length and a crank axis, each said planetary gear being pivotably secured to said at least one crank about a pivot point that is offset from said crank axis, and being sized and arranged such that as said at least one crank is rotated said planetary gears engage and rotate relative to said sun/ring gears while simultaneously revolving about said crank axis so as to form an epicyclic gear train, and two foot pedals each pivotably secured to a corresponding one of said planetary gears, said foot pedals being sized and arranged to support said feet of a user and whereby each said foot-pedal follows a substantially elliptical foot-path as said at least one crank is rotated and said substantially elliptical foot-path comprising a major axis.

41. (Previously Presented) The exercise apparatus of Claim 40 wherein said effective working diameter of each said planetary gears is equal to one-half said effective working diameter of each said sun/ring gear.

42. (Previously Presented) The exercise apparatus of Claim 40 wherein said effective working diameter of each said planetary gears is equal to about twice said effective crank-arm length of said at least one crank.

43. (Previously Presented) The exercise apparatus of Claim 40 wherein said major axis of said substantially elliptical foot-path is greater than twice said effective crank-arm length of said at least one crank.

44. CANCELLED

45. CANCELLED

46. CANCELLED

47. CANCELLED

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